I claim:

1. Microscope (2) with a stand (12) and a microscope stage (18) disposed on the stand (12) and capable of being moved in all three space directions by means of motors, characterized in that in or on the stand (12) there is provided at least one temperature sensor (30), that there is provided a regulating and control unit (10) comprising a data storage device (9) and a microprocessor (11), a correction table (44) being stored in said data storage device (9) and containing drift values for the three space directions (X, Y and Z) of the stand (12) as a function of temperature, and that temperature sensors (30) are connected to the microprocessor and provide signals on the basis of which it is possible to call up appropriate values for correction and whereby the regulating and control unit (10) adjusts a first, second and third motor (21, 22, 23) on the microscope stage (18) so that the microscope stage (18) assumes a stable position in space independently of the temperature.

2. Microscope according to claim 1, characterized in that the correction table (44) can be established manually.

3. Microscope according to claim 1, characterized in that the correction table (44) can be established automatically.

4. Microscope according to claim 1, characterized in that the regulating and control unit (10) is integrated into the stand (12) of the microscope (2).

5. Microscope according to claim 1, characterized in that the regulating and control unit (10) in the stand (12) is disposed in an external electronics box (42).

6. Microscope according to claim 4 and 5, characterized in that there is provided an input unit (38) which is connected with the regulating and control unit (10).

7. Microscope according to claim 1, characterized in that the input unit (38) is a mouse, a trackball, a key or a touchscreen.

8. Method for correcting XYZ drift caused by temperature changes in a microscope (2) with a stand (12), a microscope stage (18) disposed on the stand (12) and being capable of being moved in all three space directions (X, Y, Z) by motors, and with at least one temperature sensor (30) disposed in or on the stand (12), characterized by the following steps:

- recording and storing a correction table (44) in a data storage device (9) in a regulating and control unit (10) associated with the microscope (2), and
- operating the microscope (2) in the examination mode so that the regulating and control unit (10), on the basis of the signals received from the temperature sensors (30) and of the contents of the correction table (44), operates the first, second and third motor (21, 22, 23) of the microscope stage (18) in a manner such that the position of said stage relative to the optical axis (13) of an objective placed in its work position is constant with time.

9. Method according to claim 8, characterized in that the correction table (44) is established manually.

10. Method according to claim 9, characterized in that a first cross hairs (34) is provided in an ocular (14) and a second cross hairs (35) is provided on a slide (36) placed on the microscope stage (18), and a person (32) brings the second cross hairs (35) into focus by setting the third motor (23) after which superposition between the first and the second cross hairs (34, 35) is attained by an appropriate setting of the first and/or the second motor (21, 22), and that) by actuating an input device (38) the data required for the displacement are transferred by the microprocessor to the correction table (44) provided in the data storage device (9).

11. Method according to claim 10, characterized in that the input device (38) is a mouse, a trackball, a key or a touchscreen.

12. Method according to claim 8, characterized in that the correction table (44) is established automatically.

13. Method according to claim 12, characterized in that only the second cross hairs (35) is provided on the slide (36) placed on the microscope stage (18), that after the mi-

croscope (2) is turned on, a camera (25) is focused on the second cross hairs (35) by an autofocus of the camera (25), that the second cross hairs (35) is displaced into the optical axis (13) of the objective (16) in the work position by an image-processing software in cooperation with the first and second motor (21, 22), and that then the data needed for the displacement are transferred to the correction table (44) available in the data storage device (9).

14. Method according to claim 8, characterized in that the regulating and control unit (10) is integrated into the stand (12) of the microscope (2).

15. Method according to claim 8, characterized in that the regulating and control unit (10) in the stand (12) is disposed in an external electronics box.

16. Method according to claim 8, characterized in that the correction table is established at the factory on the basis of a statistical evaluation of several stands and made available in the regulating and control unit (10) of the microscope.